Hazards of butterfly collecting. Pity poor Buddha – South India, September, 1986

I set out with Gordon Thompson on 16 September 1986 in search of *Papilio buddha* Westwood. It was extremely rare in the Nilgiri Mountains where I lived at the time, and generally rare everywhere (I had seen only three in four months). It was also usually impossible to catch. *P. buddha* (the Buddha Peacock) is one of the metallic green Swallowtails of the *Papilio palinurus*-group. It is among the most beautiful butterflies in India, or for that matter the world; all the Peacock Swallowtails are beautiful but somehow the tone of green, vivid yet soft, and lacking any blue gives it an edge, perhaps a lack of some slight garishness. Gordon knew a place some 200 km further north in the Kanara District of Karnataka State, and that was where we were heading.

Papilio buddha is strictly endemic to the true lowland rainforests of the Western Ghats and does not extend to Sri Lanka; this pattern is shared with Malabar Banded Swallowtail *P. liomedon* Moore and the Malabar Raven *P. dravidarum* Wood-Mason, as well as red-bodied Malabar Rose *Pachliopta pandiyana* Moore. The huge Southern Birdwing *Troides minos* Cramer is somewhat more robust, frequenting also less dense forest and higher altitudes. The Crimson Rose *Pachliopta hector* L., the Blue Mormon *Papilio polymnestor* Cramer and the Common Banded Peacock *Papilio crino* Fabricius inhabit drier areas, though *P. polymnestor* also flies in forest; all three extend to Calcutta and Bangladesh, but are still effectively South Indian endemics, and do not reach Calcutta every year. Finally, the Paris (Tamil) Peacock *Papilio paris tamilana* Moore is so distinctive that it could be considered a species in its own right. So, *P. buddha* forms part of an unusually large group of endemic and semi-endemic Swallowtails given the relatively low overall level of endemicity in South India.

Gordon had fixed us up with a lovely forest bungalow, inside the forest along a lovely river, and we had a simple dinner. Gordon promised better next day, for he would be casting for *masheer* in the river bubbling past our veranda. We listened to the 22.00 news on the BBC World Service; of all things to take to the bush a radio capable of getting the World Service is the one I would most miss.

Over breakfast Gordon told me that his *buddha*-place had been discovered about fourteen years earlier and had been the only place they knew where *P. buddha* was quite common. It was on some old temple grounds, about 150 metres from the forest edge, a wasteland that had numerous large *Clerodendron squamosum* bushes, with their huge, almost spherical scarlet flower-clusters. All Swallowtails in the area converged on these flowers in the morning hours from 09.00 till 13.00. Gordon also said that *buddha* was attacked by a species of sunbird that did not attack other Swallowtails, which sounded odd; he said there would be ample opportunity to observe it.

We reached the spot early; Gordon insisted that we should see the first Swallowtails actually leaving the forest. There were hardly any butterflies when we arrived, but soon they started coming, in ones or twos. Once there, they stayed for a long time, and soon more Swallowtails were milling about than I have ever seen on a single

flower patch. It did not take long to get a good series of all the South India endemics and some voucher material of the other *Papilio*. *Pachliopta*, *Chilasa*, and *Graphium* were very thin on the ground so we got 'only' 12 Swallowtails in all – out of a South Indian total of 19.

There were several Sunbirds around, too. Of these, only one would chase or attack the *P. buddha*. This was the male of the tiny Purple-Rumped Sunbird *Nectarinia zeylonica sola* Viellot, which arrived on the scene a bit later than the first *P. buddha*. The moment a male of one of these Sunbirds spied a *P. buddha* approaching, they flew off to intercept, with audible clicks of the beaks. The much larger butterfly was mostly chased off without evident harm, but sometimes bits of wing fell off first, and in one case the forewing costa was broken and the butterfly wholly disabled. Those *P. buddha* that managed to reach the flowers, suffered less aggression. During our two days we saw more than 25 such attacks.

The immediate thought was that the Sunbird was trying to protect an important food source, *Clerodendron* being a fine nectar plant not only in India. However, no other Swallowtails were attacked, though their flight patterns were quite similar, and none of the few Sunbirds of other species ever attacked butterflies at all – nor did females of the perpetrator. I believe the true answer is that the Sunbird looks at *P. buddha* as a supernormal rival. The green band of the Swallowtail is of just the same tone as the crown and scapulars (wing-shoulders) of the bird, but much more extensive. The evidence was a bit too thin for acceptance of the paper by a major ornithological journal, but I do not have the imagination to find another reason. For more information on South Indian Swallowtails and *P. buddha* see my separate papers (1987. *Papilio Intl.*, **3**:202-205, and 1998. *Papilio Intl.*, **4**: 275-294).

In the afternoon we collected in the forest but saw very few Swallowtails. At 15.00 Gordon went off fishing for *masheer*, one of the best sporting fish in India. I went to see him in his little pool and was able to imagine that it was a pleasant way of passing time. He only got two fish, each adequate for one person; the taste of *masheer* is great, the eating of food gathered by your own expedition giving an added pleasure. But those small additional, free trifurcate bones are a nuisance. I would prefer my fish bigger, which is still possible in India. Gordon later showed me pictures of some of his best catches, sometimes in rivers so small they looked incapable of housing a family of sticklebacks.– TORBEN B. LARSEN, Bangladesh, World Bank, 1818 H. Street N. W., Washington D.C., 20433, USA (E-mail: torbenlarsen@compuserve.com).